CERTIFICATION
LICENCE TO USE KEYMARK

Certificate No SKM 10209.2

DQS Hellas grants the present certificate to the enterprise:

SOLE S.A.
26, Amarousiou Chalandriou, 15125 Marousi

for the product:

Solar Systems Family
125-1-S200, 150-1-S200, 150-1-S230, 150-1-S260, 200-1-S200, 200-1-S230, 200-1-S260, 200-2-S200, 250-1-S230, 250-1-S260, 250-2-S200, 300-2-S200, 300-2-S230, 300-2-S260, 300-3-S260, 350-2-S200, 350-2-S230, 350-2-S260, 350-3-S260, 400-2-S230, 400-2-S260, 400-3-S260

Trademarks: SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC

which is produced in conformity with the normative document:

EN 12976-1:2017
EN 12976-2:2019
EN 12975-1:2011
ISO 9806:2017

E 31

at the following location:

Laikon Agonon & Lefktron, 13671 Acharnai

The present certificate is granted in accordance with:

- *the DQS Hellas General Rules for the Certification of Products,*
- *the Specific Rule for Certification EKIIII.001 «Specific Rule for Certification of Solar Collectors, and Thermal Solar Heating Systems for Domestic Hot Water»,*
- *the Specific CEN Keymark Scheme Rules for Solar Thermal Products,*
- *the Annex of Solar Keymark Certificate.*

and is ruled by the terms of the relevant contract between DQS Hellas and the enterprise.

Date of issue: ***2025-04-10***
Date of valid: ***2027-11-20***

Panagiotis Giannoutsos
Director of Certification

Dr. Emmanuel Deliyannakis
Managing Director

Summary of	EN12976-2	SOLAR SYSTEM test results	Licence Number	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.		Country	Greece	
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC		Website	www.sole.gr	
Street	Laikon Agonon & Lefktron		E-mail	info@sole.gr	
Postal Code	13671	Acharnai	Tel. / Fax	+30	210 2389500

System classification	
Application(s)	Hot water
Solar loop, circulation principle	Thermosyphon
Direct solar loop / heat exchanger	Heat exchanger
Open, vented or closed solar loop	Closed
Drain back/down	Always filled (no drain)
Store location	Outdoor
Store orientation (of main axis)	Other
Type of auxiliary heating (internal back-up heat)	Electric
If other auxiliary/internal back-up heating, please specifiy:	
Solar+supplementary OR Solar-only / Solar pre-heat	Solar only / Solar preheat

Collector(s)

Company	SOLE S.A.
Keymark lic.no. if available	*SKM 10209.1*

Collector name	Per module: Gross Area (Ag)	Per module: Gross length	Per module: Gross width
	m²	mm	mm
SUPERSOL S200 (ECO S200)	1.88	1960	960
SUPERSOL S230 (ECO S230)	2.28	1960	1165
SUPERSOL S260 (ECO S260)	2.64	2135	1238

Heat store(s)

Company	SOLE S.A.
Keymark lic.no. if available	

Store name	Total nominal volume	Gross height	Gross width	Gross depth	Auxiliary heated volume	Electrical aux. heating power
	litres	mm	mm	mm	litres	kW
SUPERSOL 125	127	1080	500			
SUPERSOL 150	142	1210	500			
SUPERSOL 200	196	1270	550			
SUPERSOL 250	244	1610	550			
SUPERSOL 300	300	1870	550			
SUPERSOL 350	365	2020	608			
SUPERSOL 400	380	2020	608			

Solar loop controller

Keymark lic.no. if available	-
Company	-
Name	-
Solar loop pump - power range	- W to - W

Solar loop fluid

Recommended/required	No recommend./requirements
Company	FluidCompany
Name	FluidName
Freezing point	-15 °C

System family overview

Collector name	Number of collectors in each configuration for each store: Store name																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 300			SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2			2							
SUPERSOL S230 (ECO						1					1					1				2			2				2			
SUPERSOL S260 (ECO						1					1					1				2	3		2	3			2	3		

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025

Comments of test lab

N.C.S.R. "DEMOKRITOS"
SOLAR ENERGY LABORATORY
Tel: +210 6503815 - Fax: +210 6544592
P.O. BOX 60037, 15310 Ag. Paraskevi, Greece

Central Offices: Kalavriton 2, 145 64 kifisia, Athens, Tel: +301 6233493-4 , Fax: +301 6233495, http://www.dqsglobal.com, e-mail: i.alexiou@dqs.gr

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 3				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			125-1-S200
Collector name	PERSOL S200 (ECO S2	No. Collectors	1
Storage name			SUPERSOL 125

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 80 l				Daily drawoff 110 l				Daily drawoff 140 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	4478	2611	0	58	6150	3154	0	51	7821	3469	0	44
WürzburgDE	-	4289	2624	0	61	5897	3217	0	55	7506	3595	0	48
Davos CH	-	4857	3910	0	81	6654	4699	0	71	8483	5077	0	60
Athens GR	-	3343	3024	0	90	4573	3847	0	84	5834	4510	0	77

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR			
G	1,157	1,230	1,684	1,736			
Ta,ave	7.5	9.0	3.2	18.5			
Tc,ave	8.5	10.0	5.4	17.8			
± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab	
Extrapolated	N.C.S.R. "DEMOKRITOS" SOLAR ENERGY LABORATORY Tel: +210 6503815 - Fax: +210 6544592 P.O. BOX 60037, 15310 Ag. Paraskevi, Greece

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150				SUPERSOL 200					SUPERSOL 250			SUPERSOL 300			SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1				1	2					2			2			2						
SUPERSOL S230 (ECO						1				1					1			2			2				2			
SUPERSOL S260 (ECO						1				1					1			2	3		2	3			2	3		

Name of system configuration				150-1-S200	
Collector name	PERSOL S200 (ECO S20	No. Collectors	1	Storage name	SUPERSOL 150

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		110 l		Daily drawoff		140 l		Daily drawoff		170 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	6150	3217	0	52	7821	3532	0	45	9492	3721	0	39
WürzburgDE	-	5897	3280	0	56	7506	3690	0	49	9114	3910	0	43
Davos CH	-	6654	4762	0	72	8483	5235	0	62	10281	5393	0	52
Athens GR	-	4573	3879	0	85	5834	4573	0	78	7064	5046	0	71

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
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Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150				SUPERSOL 200					SUPERSOL 250				UPERSOL 3				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1				1	2					2			2				2							
SUPERSOL S230 (ECO						1				1					1				2				2				2			
SUPERSOL S260 (ECO						1				1					1				2	3			2	3			2	3		

Name of system configuration			150-1-S230
Collector name	PERSOL S230 (ECO S2	No. Collectors	1
Storage name	SUPERSOL 150		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		110 l		Daily drawoff		140 l		Daily drawoff		170 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	6150	3437	0	56	7821	3847	0	49	9492	4100	0	43
WürzburgDE	-	5897	3469	0	59	7506	3974	0	53	9114	4289	0	47
Davos CH	-	6654	5140	0	77	8483	5740	0	68	10281	6055	0	59
Athens GR	-	4573	4037	0	88	5834	4793	0	82	7064	5393	0	76

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
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Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			150-1-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	1
Storage name	SUPERSOL 150		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		110 l		Daily drawoff		140 l		Daily drawoff		170 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	6150	3564	0	58	7821	4068	0	52	9492	4384	0	46
WürzburgDE	-	5897	3595	0	61	7506	4163	0	55	9114	4573	0	50
Davos CH	-	6654	5361	0	81	8483	6086	0	72	10281	6496	0	63
Athens GR	-	4573	4131	0	90	5834	4951	0	85	7064	5613	0	79

Perf. indicators for the table above

Qd,sh	MJ/y	**Not relevant for solar domestic hot water system**
Qd	MJ/y	**Annual heat demand for domestic hot water**
QL	MJ/y	**Annual heat energy delivered by the solar system**
Qpar	MJ/y	**Annual parasitic energy: (electricity for pumps/controllers)**
$f_{sol}=Q_L/Q_d$	-	**Solar fraction**

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	**Annual irradiation South, 45°**
Ta,ave	°C	**Annual average outdoor air temperature**
Tc,ave	°C	**Annual average mains cold water temp.**
ΔTc	K	**Seasonal variation of Tc**
Th	45 °C	**Desired hot water temperature (mixing valve temperature).**

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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P.O. BOX 60037, 15310 Ag. Paraskevi, Greece

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
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Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

For each storage and collector size, give number of collectors

Collector name	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250					SUPERSOL 300					SUPERSOL 350					SUPERSOL 400				
SUPERSOL S200 (ECO	1					1					1	2					2				2					2									
SUPERSOL S230 (ECO						1					1					1					2					2					2				
SUPERSOL S260 (ECO						1					1					1					2	3				2	3				2	3			

Name of system configuration			200-1-S200
Collector name	PERSOL S200 (ECO S2(	No. Collectors	1
Storage name	SUPERSOL 200		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 170 l				Daily drawoff 200 l				Daily drawoff 250 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	9492	3879	0	41	11164	4005	0	36	13939	4100	0	29
WürzburgDE	-	9114	4100	0	45	10691	4257	0	40	13371	4352	0	33
Davos CH	-	10281	5645	0	55	12110	5771	0	48	15137	5866	0	39
Athens GR	-	7064	5203	0	74	8326	5613	0	67	10407	6055	0	58

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR			
G	1,157	1,230	1,684	1,736			
Ta,ave	7.5	9.0	3.2	18.5			
Tc,ave	8.5	10.0	5.4	17.8			
± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

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Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 300				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			200-1-S230
Collector name	PERSOL S230 (ECO S2	No. Collectors	1
Storage name	SUPERSOL 200		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		170 l		Daily drawoff		200 l		Daily drawoff		250 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	9492	4289	0	45	11164	4478	0	40	13939	4636	0	33
WürzburgDE	-	9114	4478	0	49	10691	4762	0	45	13371	4920	0	37
Davos CH	-	10281	6339	0	62	12110	6559	0	54	15137	6654	0	44
Athens GR	-	7064	5550	0	79	8326	6055	0	73	10407	6623	0	64

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration				200-1-S260	
Collector name	PERSOL S260 (ECO S2	No. Collectors	1	Storage name	SUPERSOL 200

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		170 l		Daily drawoff		200 l		Daily drawoff		250 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	9492	4573	0	48	11164	4825	0	43	13939	5046	0	36
WürzburgDE	-	9114	4730	0	52	10691	5077	0	47	13371	5330	0	40
Davos CH	-	10281	6780	0	66	12110	7096	0	59	15137	7253	0	48
Athens GR	-	7064	5771	0	82	8326	6339	0	76	10407	7033	0	68

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 300				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			200-2-S200
Collector name	PERSOL S200 (ECO S2(	No. Collectors	2
Storage name	SUPERSOL 200		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 170 l				Daily drawoff 200 l				Daily drawoff 250 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	9492	5109	0	54	11164	5487	0	49	13939	5866	0	42
WürzburgDE	-	9114	5203	0	57	10691	5676	0	53	13371	6150	0	46
Davos CH	-	10281	7663	0	75	12110	8199	0	68	15137	8609	0	57
Athens GR	-	7064	6118	0	87	8326	6843	0	82	10407	7758	0	75

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			250-1-S230
Collector name	PERSOL S230 (ECO S2	No. Collectors	1
Storage name			SUPERSOL 250

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 200 l				Daily drawoff 250 l				Daily drawoff 300 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	11164	4793	0	43	13939	5046	0	36	16746	5140	0	31
WürzburgDE	-	10691	5046	0	47	13371	5361	0	40	16052	5456	0	34
Davos CH	-	12110	7001	0	58	15137	7285	0	48	18165	7348	0	40
Athens GR	-	8326	6307	0	76	10407	7064	0	68	12488	7537	0	60

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 3			SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2			2							
SUPERSOL S230 (ECO						1					1					1				2			2				2			
SUPERSOL S260 (ECO						1					1					1				2	3		2	3			2	3		

Name of system configuration			250-1-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	1
Storage name			SUPERSOL 250

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		200 l		Daily drawoff		250 l		Daily drawoff		300 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	11164	5172	0	46	13939	5487	0	39	16746	5645	0	34
WürzburgDE	-	10691	5361	0	50	13371	5803	0	43	16052	5960	0	37
Davos CH	-	12110	7600	0	63	15137	7979	0	53	18165	8105	0	45
Athens GR	-	8326	6591	0	79	10407	7474	0	72	12488	8042	0	64

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2				2				2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			250-2-S200
Collector name	PERSOL S200 (ECO S2(	No. Collectors	2
Storage name	SUPERSOL 250		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 200 l				Daily drawoff 250 l				Daily drawoff 300 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	11164	5960	0	53	13939	6591	0	47	16746	6969	0	42
WürzburgDE	-	10691	6055	0	57	13371	6843	0	51	16052	7316	0	46
Davos CH	-	12110	8925	0	74	15137	9839	0	65	18165	10218	0	56
Athens GR	-	8326	7190	0	86	10407	8389	0	81	12488	9272	0	74

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR			
G	1,157	1,230	1,684	1,736			
Ta,ave	7.5	9.0	3.2	18.5			
Tc,ave	8.5	10.0	5.4	17.8			
± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Tested

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250					SUPERSOL 300					SUPERSOL 350					SUPERSOL 400				
SUPERSOL S200 (ECO	1					1					1	2					2				2					2									
SUPERSOL S230 (ECO						1					1					1					2					2					2				
SUPERSOL S260 (ECO						1					1					1					2	3				2	3				2	3			

Name of system configuration			300-2-S200
Collector name	PERSOL S200 (ECO S2	No. Collectors	2	Storage name	SUPERSOL 300

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 250 l				Daily drawoff 300 l				Daily drawoff 400 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	6843	0	49	16746	7316	0	44	22327	7695	0	34
WürzburgDE	-	13371	7096	0	53	16052	7695	0	48	21413	8105	0	38
Davos CH	-	15137	10218	0	68	18165	10754	0	59	24220	11069	0	46
Athens GR	-	10407	8578	0	82	12488	9587	0	77	16651	10880	0	65

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR
G	1,157	1,230	1,684	1,736
Ta,ave	7.5	9.0	3.2	18.5
Tc,ave	8.5	10.0	5.4	17.8
± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000 kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

For each storage and collector size, give number of collectors

Collector name	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250					JPERSOL 3					SUPERSOL 350					SUPERSOL 400				
SUPERSOL S200 (ECO	1					1					1	2					2				2					2									
SUPERSOL S230 (ECO						1					1					1					2					2					2				
SUPERSOL S260 (ECO						1					1					1					2	3				2	3				2	3			

Name of system configuration				300-2-S230	
Collector name	PERSOL S230 (ECO S2	No. Collectors	2	Storage name	SUPERSOL 300

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		250 l		Daily drawoff		300 l		Daily drawoff		400 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	7348	0	53	16746	7947	0	47	22327	8546	0	38
WürzburgDE	-	13371	7537	0	56	16052	8262	0	51	21413	8988	0	42
Davos CH	-	15137	11006	0	73	18165	11794	0	65	24220	12331	0	51
Athens GR	-	10407	8925	0	86	12488	10060	0	81	16651	11637	0	70

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR
G	1,157	1,230	1,684	1,736
Ta,ave	7.5	9.0	3.2	18.5
Tc,ave	8.5	10.0	5.4	17.8
± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 300				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			300-2-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	2
Storage name	SUPERSOL 300		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		250 l		Daily drawoff		300 l		Daily drawoff		400 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	7663	0	55	16746	8389	0	50	22327	9145	0	41
WürzburgDE	-	13371	7821	0	58	16052	8672	0	54	21413	9587	0	45
Davos CH	-	15137	11574	0	76	18165	12551	0	69	24220	13308	0	55
Athens GR	-	10407	9145	0	88	12488	10375	0	83	16651	12204	0	73

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR
G	1,157	1,230	1,684	1,736
Ta,ave	7.5	9.0	3.2	18.5
Tc,ave	8.5	10.0	5.4	17.8
± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000 kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 3		SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2			2							
SUPERSOL S230 (ECO						1					1					1				2			2				2			
SUPERSOL S260 (ECO						1					1					1				2	3		2	3			2	3		

Name of system configuration				300-3-S260	
Collector name	PERSOL S260 (ECO S2	No. Collectors	3	Storage name	SUPERSOL 300

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		250 l		Daily drawoff		300 l		Daily drawoff		400 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	13939	8231	0	59	16746	9145	0	55	22327	10281	0	46
WürzburgDE	-	13371	8294	0	62	16052	9335	0	58	21413	10659	0	50
Davos CH	-	15137	12425	0	82	18165	13750	0	76	24220	15169	0	63
Athens GR	-	10407	9492	0	91	12488	10880	0	87	16651	13087	0	79

Perf. indicators for the table above

Qd,sh	MJ/y	**Not relevant for solar domestic hot water system**
Qd	MJ/y	**Annual heat demand for domestic hot water**
QL	MJ/y	**Annual heat energy delivered by the solar system**
Qpar	MJ/y	**Annual parasitic energy: (electricity for pumps/controllers)**
$f_{sol}=Q_L/Q_d$	-	**Solar fraction**

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	**Annual irradiation South, 45°**
Ta,ave	°C	**Annual average outdoor air temperature**
Tc,ave	°C	**Annual average mains cold water temp.**
ΔTc	K	**Seasonal variation of Tc**
Th	45 °C	**Desired hot water temperature (mixing valve temperature).**

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000 kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																								
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 300				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			350-2-S200
Collector name	PERSOL S200 (ECO S2	No. Collectors	2
Storage name			SUPERSOL 350

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		300 l		Daily drawoff		400 l		Daily drawoff		600 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	7474	0	45	22327	7979	0	36	33428	8199	0	25
WürzburgDE	-	16052	7821	0	49	21413	8452	0	39	32167	8672	0	27
Davos CH	-	18165	10975	0	60	24220	11479	0	47	36266	11668	0	32
Athens GR	-	12488	9713	0	78	16651	11164	0	67	24945	12331	0	49

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

For each storage and collector size, give number of collectors

Collector name	SUPERSOL 125	SUPERSOL 150	SUPERSOL 200	SUPERSOL 250	SUPERSOL 300	SUPERSOL 350	SUPERSOL 400
SUPERSOL S200 (ECO	1	1	1 2	2	2	2	
SUPERSOL S230 (ECO		1	1	1	2	2	2
SUPERSOL S260 (ECO		1	1	1	2 3	2 3	2 3

Name of system configuration				350-2-S230	
Collector name	PERSOL S230 (ECO S2	No. Collectors	2	Storage name	SUPERSOL 350

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 300 l				Daily drawoff 400 l				Daily drawoff 600 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	8136	0	49	22327	8893	0	40	33428	9209	0	28
WürzburgDE	-	16052	8452	0	53	21413	9366	0	44	32167	9713	0	30
Davos CH	-	18165	12110	0	67	24220	12867	0	53	36266	13151	0	36
Athens GR	-	12488	10218	0	82	16651	11984	0	72	24945	13718	0	55

Perf. indicators for the table above

Qd,sh	MJ/y	**Not relevant for solar domestic hot water system**
Qd	MJ/y	**Annual heat demand for domestic hot water**
QL	MJ/y	**Annual heat energy delivered by the solar system**
Qpar	MJ/y	**Annual parasitic energy: (electricity for pumps/controllers)**
$f_{sol}=Q_L/Q_d$	-	**Solar fraction**

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	**Annual irradiation South, 45°**
Ta,ave	°C	**Annual average outdoor air temperature**
Tc,ave	°C	**Annual average mains cold water temp.**
ΔTc	K	**Seasonal variation of Tc**
Th	45 °C	**Desired hot water temperature (mixing valve temperature).**

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000 kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
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Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 3				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			350-2-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	2
Storage name	SUPERSOL 350		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		300 l		Daily drawoff		400 l		Daily drawoff		600 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	8578	0	51	22327	9524	0	43	33428	9997	0	30
WürzburgDE	-	16052	8862	0	55	21413	9997	0	47	32167	10533	0	33
Davos CH	-	18165	12867	0	71	24220	13939	0	58	36266	14317	0	39
Athens GR	-	12488	10533	0	84	16651	12520	0	75	24945	14664	0	59

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR
	G	1,157	1,230	1,684	1,736
	Ta,ave	7.5	9.0	3.2	18.5
	Tc,ave	8.5	10.0	5.4	17.8
	± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
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Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

For each storage and collector size, give number of collectors

Collector name	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 3				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2								
SUPERSOL S230 (ECO						1					1					1				2				2				2				
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3			

Name of system configuration				350-3-S260	
Collector name	PERSOL S260 (ECO S2(	No. Collectors	3	Storage name	SUPERSOL 350

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		300 l		Daily drawoff		400 l		Daily drawoff		600 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	9398	0	56	22327	10754	0	48	33428	11605	0	35
WürzburgDE	-	16052	9555	0	60	21413	11101	0	52	32167	12236	0	38
Davos CH	-	18165	14160	0	78	24220	15926	0	66	36266	16777	0	46
Athens GR	-	12488	11069	0	89	16651	13466	0	81	24945	16367	0	66

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Tel: +210 6503815 - Fax: +210 6544592
P.O. BOX 60037, 15310 Ag. Paraskevi, Greece

All values are subject to some uncertainty; e.g. the uncertainty on system output is typically in the range of ± 5 % to ± 15 %

Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 3				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			400-2-S230
Collector name	PERSOL S230 (ECO S2	No. Collectors	2
Storage name			SUPERSOL 400

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		300 l		Daily drawoff		400 l		Daily drawoff		600 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	7663	0	46	22327	8262	0	37	33428	8515	0	25
WürzburgDE	-	16052	8010	0	50	21413	8735	0	41	32167	8988	0	28
Davos CH	-	18165	11290	0	62	24220	11889	0	49	36266	12110	0	33
Athens GR	-	12488	9839	0	79	16651	11416	0	69	24945	12772	0	51

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions		Stockholm SE	Würzburg DE	Davos CH	Athens GR			
	G	1,157	1,230	1,684	1,736			
	Ta,ave	7.5	9.0	3.2	18.5			
	Tc,ave	8.5	10.0	5.4	17.8			
	± ΔTc	6.4	3.0	0.8	7.4			

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

Extrapolated

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
Annex to Solar KEYMARK Certificate			Issued	2025-04-10

Company	SOLE S.A.	Country	Greece
Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																									
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				UPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			400-2-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	2	Storage name	SUPERSOL 400

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff 300 l				Daily drawoff 400 l				Daily drawoff 600 l			
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	8578	0	51	22327	9555	0	43	33428	10028	0	30
WürzburgDE	-	16052	8862	0	55	21413	10028	0	47	32167	10565	0	33
Davos CH	-	18165	12835	0	71	24220	13970	0	58	36266	14349	0	40
Athens GR	-	12488	10533	0	84	16651	12551	0	75	24945	14696	0	59

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR
G	1,157	1,230	1,684	1,736
Ta,ave	7.5	9.0	3.2	18.5
Tc,ave	8.5	10.0	5.4	17.8
± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000	kPa

Testing Laboratory	NCSR "DEMOKRITOS"
Website	www.solar.demokritos.gr
Test report id. number	6134 DE2, 6134 F1, 6135 DE2
Date of test report	29/04/2025, 20/2/2025, 29/04/2025
Test method	ISO 9459-5 (DST)

Comments of test lab

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Version 4.5, 2017-10-24

Summary of	EN12976-2	test results	Certification No.	SKM 10209.2
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Brand (optional)	SUPERSOL, EUROSTAR ECO, HELIOTHERMO ECO, EUROSTAR MARE, SUNLIT ECO, FINO ECO, OLYMPUS ECO, AQUASOL ECO, SUNTEC	Website	www.sole.gr
Street	Laikon Agonon & Lefktron	E-mail	info@sole.gr
Postal Code	13671 Acharnai	Tel. / Fax	+30 210 2389500

System family overview

Collector name	For each storage and collector size, give number of collectors																											
	SUPERSOL 125					SUPERSOL 150					SUPERSOL 200					SUPERSOL 250				SUPERSOL 30				SUPERSOL 350				SUPERSOL 400			
SUPERSOL S200 (ECO	1					1					1	2					2			2				2							
SUPERSOL S230 (ECO						1					1					1				2				2				2			
SUPERSOL S260 (ECO						1					1					1				2	3			2	3			2	3		

Name of system configuration			400-3-S260
Collector name	PERSOL S260 (ECO S2	No. Collectors	3
Storage name	SUPERSOL 400		

Calculated annual results for "solar-only / preheat system"

Location	Qd,sh	Daily drawoff		300 l		Daily drawoff		400 l		Daily drawoff		600 l	
		Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol	Qd,hw	QL	Qpar	fsol
	MJ/y	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%	MJ/y	MJ/y	MJ/y	%
Stockholm SE	-	16746	9429	0	56	22327	10817	0	48	33428	11731	0	35
WürzburgDE	-	16052	9587	0	60	21413	11195	0	52	32167	12362	0	38
Davos CH	-	18165	14191	0	78	24220	16052	0	66	36266	16935	0	47
Athens GR	-	12488	11101	0	89	16651	13497	0	81	24945	16493	0	66

Perf. indicators for the table above

Qd,sh	MJ/y	Not relevant for solar domestic hot water system
Qd	MJ/y	Annual heat demand for domestic hot water
QL	MJ/y	Annual heat energy delivered by the solar system
Qpar	MJ/y	Annual parasitic energy: (electricity for pumps/controllers)
$f_{sol}=Q_L/Q_d$	-	Solar fraction

Ref. conditions	Stockholm SE	Würzburg DE	Davos CH	Athens GR
G	1,157	1,230	1,684	1,736
Ta,ave	7.5	9.0	3.2	18.5
Tc,ave	8.5	10.0	5.4	17.8
± ΔTc	6.4	3.0	0.8	7.4

G	kWh/m²	Annual irradiation South, 45°
Ta,ave	°C	Annual average outdoor air temperature
Tc,ave	°C	Annual average mains cold water temp.
ΔTc	K	Seasonal variation of Tc
Th	45 °C	Desired hot water temperature (mixing valve temperature).

Max. operating press. - collector side	1,500	kPa	Max. operating press. - tank side	1,000 kPa

Testing Laboratory	NCSR "DEMOKRITOS"
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